Event 3: Launch of the paper ‘Building carbon reduction into procurement processes’

14 November 2023

Agenda

13:00 – 13:05 Welcome by Sue Percy, CIHT CEO

13:05 – 13:25 Presentation of the report by Mike O'Dowd Jones and Comment from David Ogden (Co-Chairs of project group)

13:25 – 13:45 Reflections on the paper
David Clegg, David Jackson, Emily Collins (project group members)

13:45 – 14:00 Q&A with the audience, moderated by Sue Percy

14:00 – 14:10 Coffee break

14:10 – 14:30 Presentations on featured case studies and examples
Kim Yates and David Clegg

14:30 – 15:00 Panel discussion chaired by Sue Percy
Panel:

- Mike O'Dowd Jones
- David Ogden
- Kim Yates
- David Clegg

15:00 – 16:00 Informal networking

Co-Chairs of the Project Group

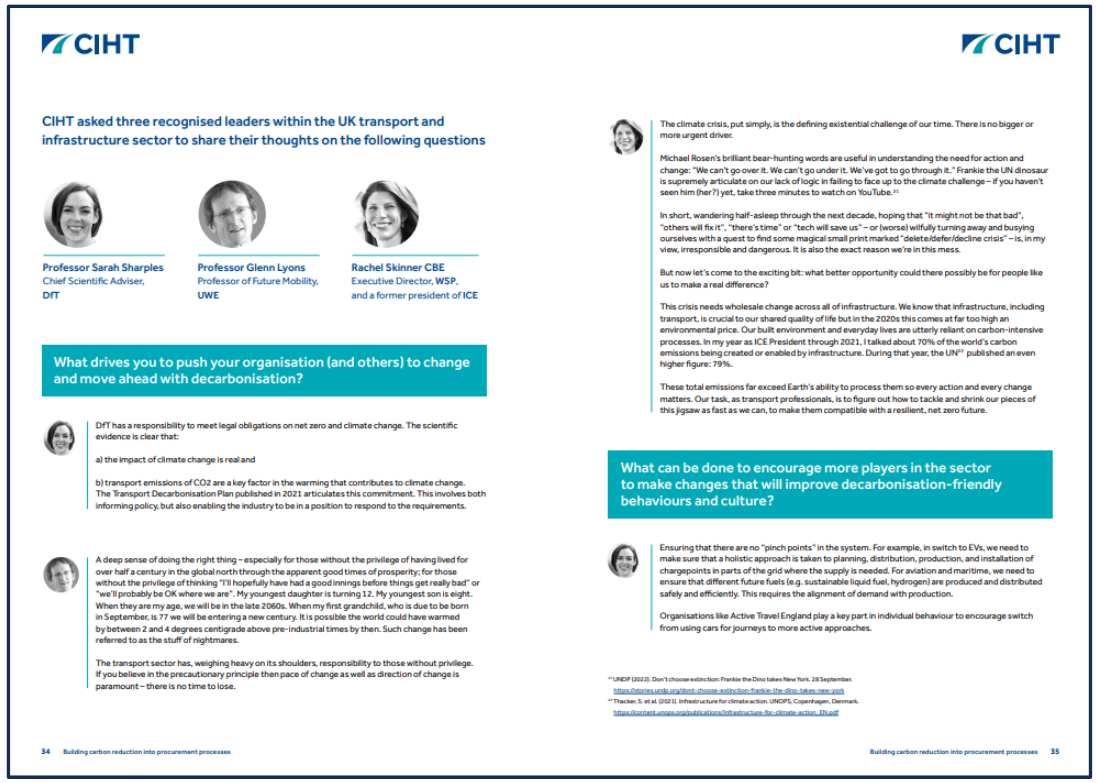
Mike O'Dowd-Jones

Strategic Commissioner for Highways and Transport Services at Somerset County Council

David Ogden

Executive Director for Asset and Maintenance at Colas Ltd.

Launch of the Paper



CIHT

CIHT asked three recognised leaders within the UK transport and infrastructure sector to share their thoughts on the following questions

Professor Sarah Sharples
Chief Scientific Adviser, DfT

Professor Glenn Lyons
Professor of Future Mobility, UWE

Rachel Skinner CBE
Executive Director, WSP, and a former president of ICE

What drives you to push your organisation (and others) to change and move ahead with decarbonisation?

DfT has a responsibility to meet legal obligations on net zero and climate change. The scientific evidence is clear that:

a) the impact of climate change is real and

b) transport emissions of CO2 are a key factor in the warming that contributes to climate change. The Transport Decarbonisation Plan published in 2021 articulates this commitment. This involves both informing policy, but also enabling the industry to be in a position to respond to the requirements.

A deep sense of doing the right thing – especially for those without the privilege of having lived for over half a century in the global north through the apparent good times of prosperity; for those without the privilege of thinking "I'll hopefully have had a good innings before things get really bad" or "we'll probably be OK where we are". My youngest daughter is turning 12. My youngest son is eight. When they are my age, we will be in the late 2060s. When my first grandchild, who is due to be born in September, is 77 we will be entering a new century. It is possible the world could have warmed by between 2 and 4 degrees centigrade above pre-industrial times by then. Such change has been referred to as the stuff of nightmares.

The transport sector has, weighing heavy on its shoulders, responsibility to those without privilege. If you believe in the precautionary principle then pace of change as well as direction of change is paramount – there is no time to lose.

The climate crisis, put simply, is the defining existential challenge of our time. There is no bigger or more urgent driver.

Michael Rosen's brilliant bear-hunting words are useful in understanding the need for action and change: "We can't go over it. We can't go under it. We've got to go through it." Frankie the UN dinosaur is supremely articulate on our lack of logic in failing to face up to the climate challenge – if you haven't seen him (her?) yet, take three minutes to watch on YouTube.[21]

In short, wandering half-asleep through the next decade, hoping that "it might not be that bad", "others will fix it", "there's time" or "tech will save us" – or (worse) wilfully turning away and busying ourselves with a quest to find some magical small print marked "delete/defer/decline crisis" – is, in my view, irresponsible and dangerous. It is also the exact reason we're in this mess.

But now let's come to the exciting bit: what better opportunity could there possibly be for people like us to make a real difference?

This crisis needs wholesale change across all of infrastructure. We know that infrastructure, including transport, is crucial to our shared quality of life but in the 2020s this comes at far too high an environmental price. Our built environment and everyday lives are utterly reliant on carbon-intensive processes. In my year as ICE President through 2021, I talked about 70% of the world's carbon emissions being created or enabled by infrastructure. During that year, the UN[22] published an even higher figure: 79%.

These total emissions far exceed Earth's ability to process them so every action and every change matters. Our task, as transport professionals, is to figure out how to tackle and shrink our pieces of this jigsaw as fast as we can, to make them compatible with a resilient, net zero future.

What can be done to encourage more players in the sector to make changes that will improve decarbonisation-friendly behaviours and culture?

Ensuring that there are no "pinch points" in the system. For example, in switch to EVs, we need to make sure that a holistic approach is taken to planning, distribution, production, and installation of chargepoints in parts of the grid where the supply is needed. For aviation and maritime, we need to ensure that different future fuels (e.g. sustainable liquid fuel, hydrogen) are produced and distributed safely and efficiently. This requires the alignment of demand with production.

Organisations like Active Travel England play a key part in individual behaviour to encourage switch from using cars for journeys to more active approaches.

[21] UNDP (2022). Don't choose extinction: Frankie the Dino takes New York. 28 September. https://stories.undp.org/dont-choose-extinction-frankie-the-dino-takes-new-york

[22] Thacker, S. et al. (2021). Infrastructure for climate action. UNOPS, Copenhagen, Denmark. https://content.unops.org/publications/Infrastructure-for-climate-action_EN.pdf

Overview of the project

This year CIHT has 3 Partner-Supported Technical Papers. Each group developed and delivered a technical paper that positively influences the sector and supports the changes the sector needs to take to progress and develop.

This piece of work looks at future proofing procurement processes so that they can deliver projects that enable the delivery of net zero.

There are 4 topics that are covered in the paper:

Policy and Legislation

Whole Life Carbon Costing

Leadership, Culture, and Behaviour Change

Contracts and Supply Chain.

Rationale

- CIHT priority to reduce carbon emissions
- Area of untapped opportunity with huge influence on how works are delivered and outcomes achieved from industry spend
- £45bn UK public sector procurement spend in the transport sector 21/22
- Transport sector is the largest greenhouse gas emissions producer 24% of UK total emissions 2020

Desired outcomes

- Increase the performance of the sector in reducing carbon emissions through procurement
- Create a reference document for CIHT and partners
- Provide useful guidance and case studies from the sector and beyond
- Influence procurement and contract management practice

Project Group

- Daniel Pitcher, Amey
- Michael Lindsay, Amey
- Emily Collins, Arcadis
- Mark Coates, Bentley Systems
- Daniel Moore, Colas Ltd
- Craig Hannam, Fosroc
- Stuart Bradshaw, Lancashire County Council
- Kalpini Dave, London Councils
- Dr Kim Yates, Mott MacDonald
- Pasha MacLachlan, Mott MacDonald
- David Purser, Project Centre Ltd
- Carly Wright, Ringway
- Rob Mcdonald, Stantec
- Simon Earl, Stantec
- Dr David Jackson, SWECO
- Barbara Butler-Griggs, VINCI
- David Clegg, WSP

Chapter 1: Policy and Legislation

PAS2080 – BSI Standard for managing carbon in buildings and infrastructure

ISO20400 – International standard tool to integrate sustainability into procurement processes

Public Procurement Notes:
PPN 05/21 - National Procurement Policy notes priority for social value including climate change .
PPN 06/21 - Carbon reduction plans in Govt contracts.
PPN 06/20 - Social value in Govt contracts.

International Case Studies

Chapter 1: Recommendations

Consistency and scalability are key – policy and legislation must accommodate organisations of all sizes while driving standardisation wherever appropriate. We recommend:

- The adoption of agreed common standards for carbon management in procurement.
- There is a need for mandates and associated guidance to be introduced to a great number of other contracts dealing with highways and transport infrastructure.
- Proactive communication, training, and knowledge exchange to support policy and legislation.
- Ongoing international engagement with governments, standards bodies and experts, to continue to share learnings and drive best practices based on experiences all over the world.

Chapter 2: Contracts and Supply Chain

Contracts can be instrumental in creating environmental value by reducing the embodied carbon within service provision.

Barriers:

- Gaps in knowledge, awareness, and application
- Length of existing contract service periods – 'locked-in' spend

Opportunities:

- New bespoke contract clauses e.g. NEC x29
- Modifying payment options to facilitate carbon reduction
- Relationships which can agree changes during contract term.

Chapter 2: Recommendations

Metrics should be measurable and equitable in-line with PAS 2080:2023 to allow a fair assessment across service providers.

For the contract to remain viable for all parties, the impact this has on the risk profile of the project needs to be reflected in the way risk is distributed across the supply chain.

There must be a willingness from the commissioning authority to design their contracts and assess tenders with carbon reduction at the core. Alternative approaches of shared responsibility vs incentivisation and targets

"Parties, the project manager, and the supervisor must act in the spirit of mutual trust and collaboration"

Chapter 3: Whole Life Carbon Assessment

The ability to influence WLC is greatest in the early stages of a project when the fewest elements are fixed.

There is a lack of consistency which means that individual organisations have different definitions of whole life carbon management, making it difficult to intercompare, and there is a need for longer-term funding settlements.

Chapter 3: Recommendations

A **consistent training** across the sector, in relation to the selection of optimal materials and optimal supply chains, in conjunction with efficient working practices.

Expand the **BOQ approach** to include carbon emissions and value of carbon saved

Quantification tools that support the WLC management process that can deliver significant benefits across the value chain

Clarity and transparency in how the value of carbon is defined in how it is calculated and assessed

Consistent set of rules relating to **data quality**, reporting requirements and transparency for all assessments

Chapter 4: Culture and Behaviour Change, Leadership, and Education and Training

- **Culture and Behaviour Change:** It is imperative that Procurement is seen as strategic for it to have an impact however, many a time the culture of an organisation does not support this.
- **The Role of Leadership:** Insights from Sarah Sharples, Glenn Lyons, Rachel Skinner
- **Education and Training:** Training for Leaders, Training for Practitioners, Training for the Supply Chain

Chapter 4: Recommendations

To ensure organisations are embedding the right culture, leadership and knowledge sharing we recommend that:

- Organisations foster a culture where **discussion and development of ideas** and change are welcomed, where silos can be broken down and where an inclusive and **aligned workforce are encouraged**
- **Training** is specific to the roles that need it and that a standardised approach to carbon in procurement is developed to support knowledge sharing
- **Leaders shape the culture of their organisations**, driving change and engage with individuals to embed carbon as a requirement in the procurement process.

David Ogden, Executive Director for Asset and Maintenance, Colas Ltd.

Insights from the Group

David Clegg

Associate Director, WSP

David Jackson

Principal Carbon Consultant, Sweco

Emily Collins

Strategic Pursuits Director, Arcadis

Building Carbon Reduction into Procurement Processes

David Clegg, Associate Director, WSP

CULTURE AND BEHAVIOUR CHANGE:

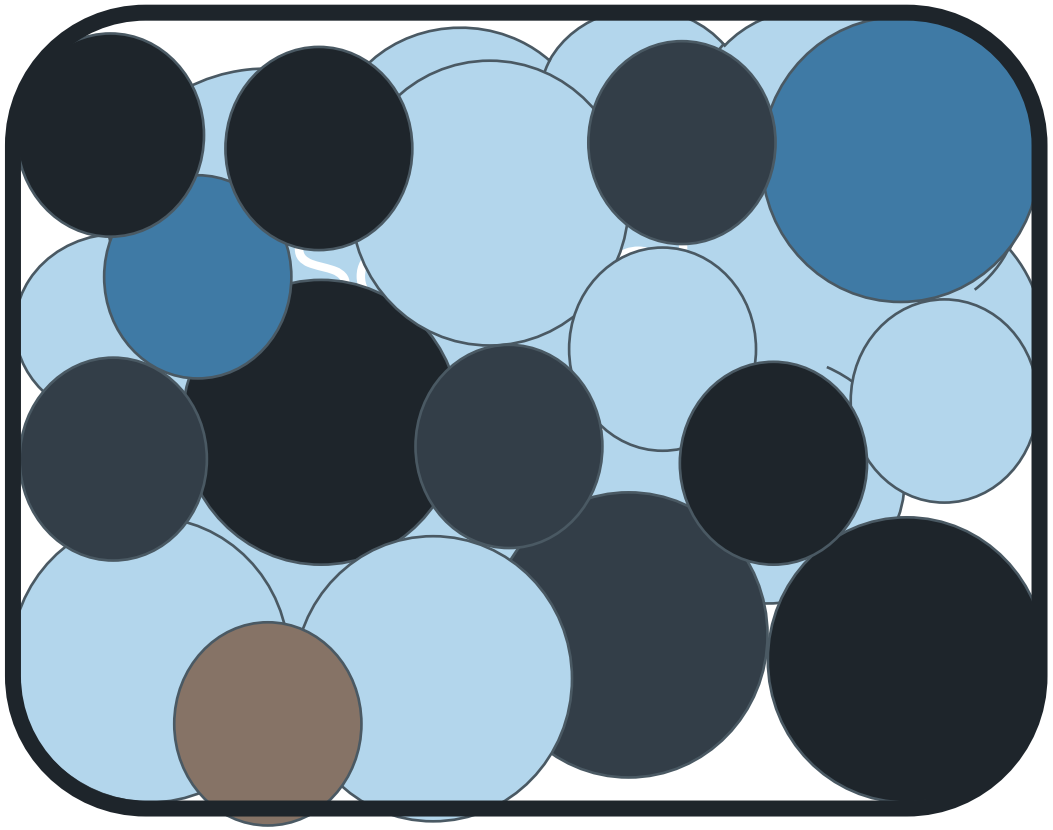
Inclusive culture

Societal need; “essential elements for human survival”

Collaborative Thuggery; to fill the problem space

“Organisations that are innovative and responsive to consumer trends.”

Chapter 4: The importance of culture and behaviour change, education and training, and leadership



BARRIERS TO THE SECTOR:

Gaps in knowledge, awareness and application

Shaping markets; to match supply and demand

X29, 18 months on; what impact has it really had?

“There must be a willingness from the commissioning authority to design contracts and assess tenders with carbon reduction at the core.”

Chapter 2: Contracts and Supply chains

CULTURE AND BEHAVIOUR CHANGE:

Incentivising behaviours

Procurement as a tool to decarbonize; Cutting through the noise

Industry Alliances; Forming an alliance with industry peers who share suppliers to motivate suppliers to set targets

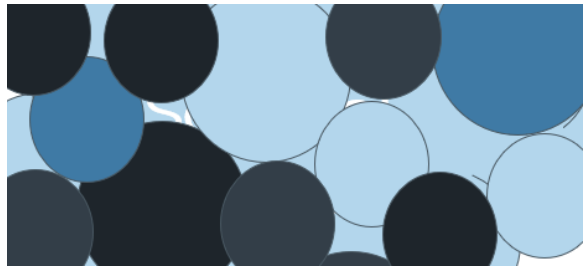
"…the more customers signal that this is a priority, the more likely it is the supplier will take action."

Chapter 4: The importance of culture and behaviour change, education and training, and leadership

IN SUMMARY…

INCLUSIVE CULTURE

Use contracts to define and fill the problem space

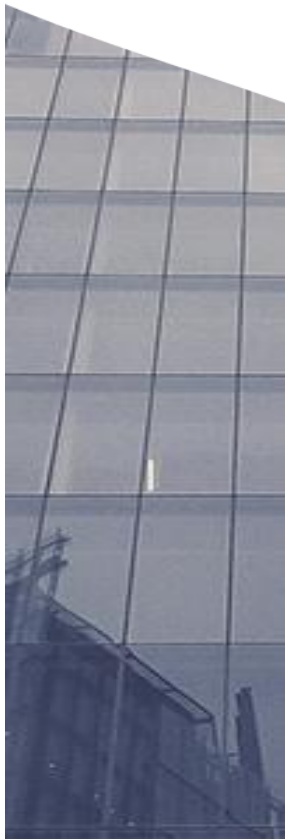


ENGAGING WITH THE MARKET

Engage with the market to make sure your customers can benefit from contemporary contractual mechanisms

THE SPIRIT OF MUTUAL TRUST AND COLLABORATION

This is not an optional statement when it comes to contract design or management



Thank you

wsp.com

David Jackson, Principal Carbon Consultant, Sweco

CIHT Carbon in Procurement:
Personal Reflections

Emily Collins, Strategic Pursuits Director

November 2023

My background

- Strategic Opportunities Director, Arcadis
- Started career in internal consultancy in telecoms sector
- 7 years embedded in National Highways
- Client-side procurement experience:
  - developing detailed capability specifications
  - business analysis support to link commercial & technical requirements
  - assessing tenders
- Leading strategic pursuits in the mobility sector since 2015
- Working closely with technical teams to develop new propositions
- Perspective: how can we ensure clients get what they want?

Challenges

- Disconnect between what clients want and what they contract for
- Overwhelm – competing priorities, confusing landscape
- Ever-increasing complexity
- Assurance and responsiveness
- Scaling to size of project / client / supplier
- Shaping offer around client need, in uncertain context

Strengths to draw on in implementing the recommendations

Diversity at every stage

- Process of developing the white paper involved really diverse backgrounds and perspectives
- Impressive breadth and depth of expertise
- Wide range of relevant specialisms
- Many organisations with global reach to insights and experience

- Learn from each other to integrate the best of everyone's expertise
- Involve different standpoints as early as possible and throughout the project lifecycle

Digital power to manage complexity

- Challenges of defining, measuring and tracking whole-life carbon add complexity to already-challenging projects
- Rapid evolution of digital tools comes at the right time
- Ability to trace requirements to benefits, see impact of decisions, assure data throughout – we have access to powerful skillsets

- Apply structured digital approaches from the outset to align details to bid picture
- Exploit the power this brings us – iterate at speed

Shared personal commitment

- Vast majority of public support net zero
- This is reflected in our organisations – quality of life is a major raison d'etre
- A quarter of UK emissions are from transport sector – we can make a huge difference
- "Deep sense of doing the right thing" is widely shared

- As leaders, keep relating what you and all colleagues do to the big picture
- Impactful decisions rely on shared language and skillset – everyone contributes

Q&A

Coffee Break

MOTT MACDONALD

Why should Whole Life Carbon management and assessment be adopted as industry norms?

Dr Kim Yates – UK & Europe Climate Change Lead

14 November 2023

Whole life carbon management

PAS2080:2023 is about…

1.

Buildings and infrastructure

2.

Systems thinking and alignment to the net zero transition

3.

Taking a whole life view and focusing on actions that drive low carbon decision-making

4.

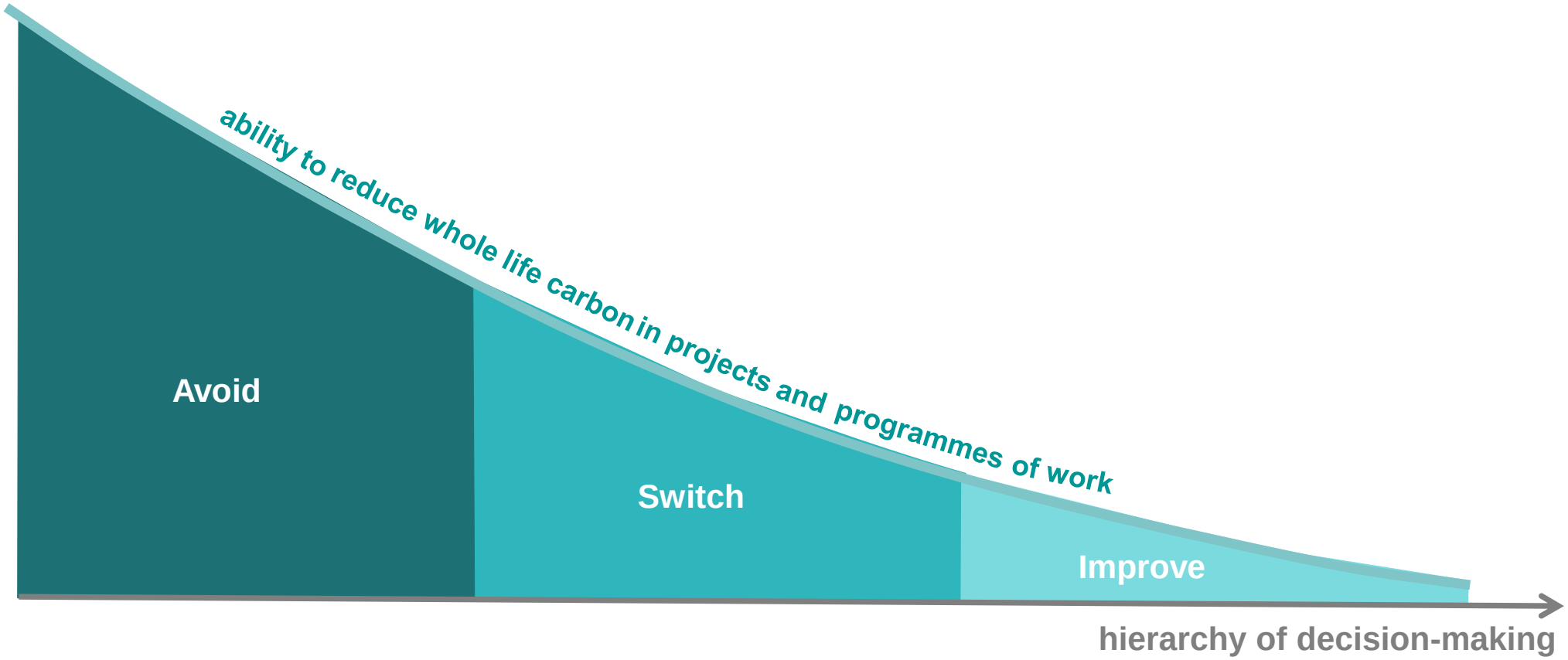
Considering Nature Based Solutions and Resilience

5.

Promoting the right behaviours and value chain collaboration

Follow carbon reduction hierarchy – start early!

For whole life: **CAPITAL + OPERATIONAL + USER CARBON**



Cross Tay Link Road (CTLR)

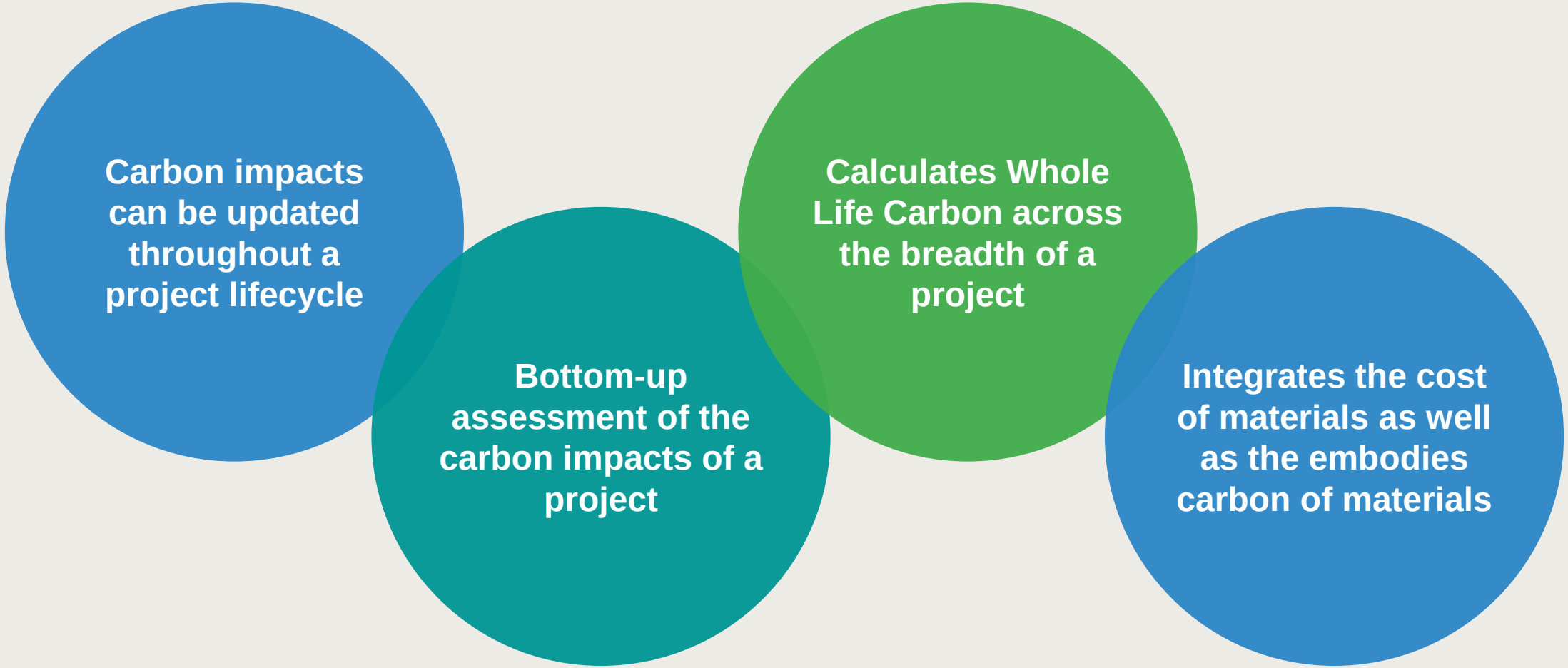
Perth, Scotland

35% reduction

In CTLR’s carbon footprint, exceeding the tender 30% baseline reduction requirement

Environmental Agency commitment to Whole Life Carbon

A transition to the Carbon and Cost Tool



Closing Thoughts

1

WLC considers every stage of a project lifecycle

2

There is more opportunity to reduce carbon early on

3

PAS2080: 2023 Is the Gold Standard for WLC

MOTT MACDONALD

Thank you

Building Carbon Reduction into Procurement Processes: Dorset Council case study

David Clegg, Associate Director, WSP

MODIFYING PAYMENT OPTIONS TO FACILITATE CARBON REDUCTION

Case Study 4: Dorset Highways Works Term Service Contract

Contract Summary

Dorset Council (formerly Dorset County Council) and Heidelberg Materials (formerly Hanson Contracting) have been delivering highway maintenance programmes through the Dorset Highways Works Term Service Contract (DHWTSC) since April 2017.

- The DHWTSC is a Highway Maintenance Efficiency Programme (HMEP) standard form of contract, which is based on a modified NEC3 Term Service Contract
- Value: £50m per year (Max £500m)
- Payment Options: A and C
- Service period:5+2+2+1 years
- Scope: Highways improvements, Structural Maintenance, Bridge and Structures construction and maintenance, Footway reconstruction and maintenance and miscellaneous construction schemes (e.g. Recycling Centres)
- Delivery model: A ‘top-up’ provision to the works delivered by the Councils in-house Highways works service

Dorset Council

Heidelberg Materials

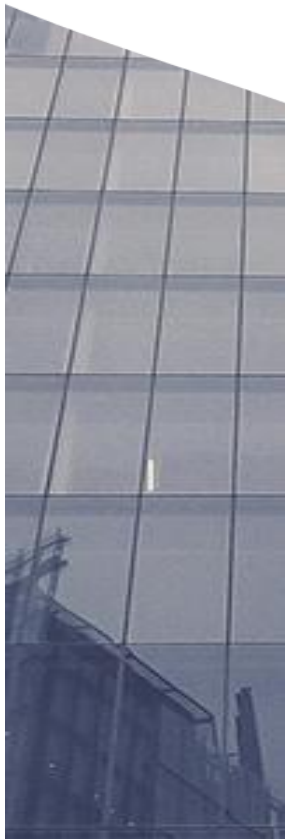
CASE STUDY 4: DORSET HIGHWAYS WORKS TERM SERVICE CONTRACT

Payment Options

Options A and C

- Option A used for Highway Improvements works and Highway Maintenance works of less than £100k and £250k respectively
- Option C used for Highway Improvements works and Highway Maintenance works of more than £100k and £250k respectively
- If Option C is used, the Contractor's share percentages are shown to the right
  - The Partnership Share percentage shall be held by the Employer until each anniversary of the Starting Date and will thereafter be invested into the Partnership

Share range	Contractors share percentage	Partnership share percentage
Less than 90%	0%	0%
From 90% to 100%	45%	10%
From 100% to 110%	50%	0%
Greater than 110%	100%	0%

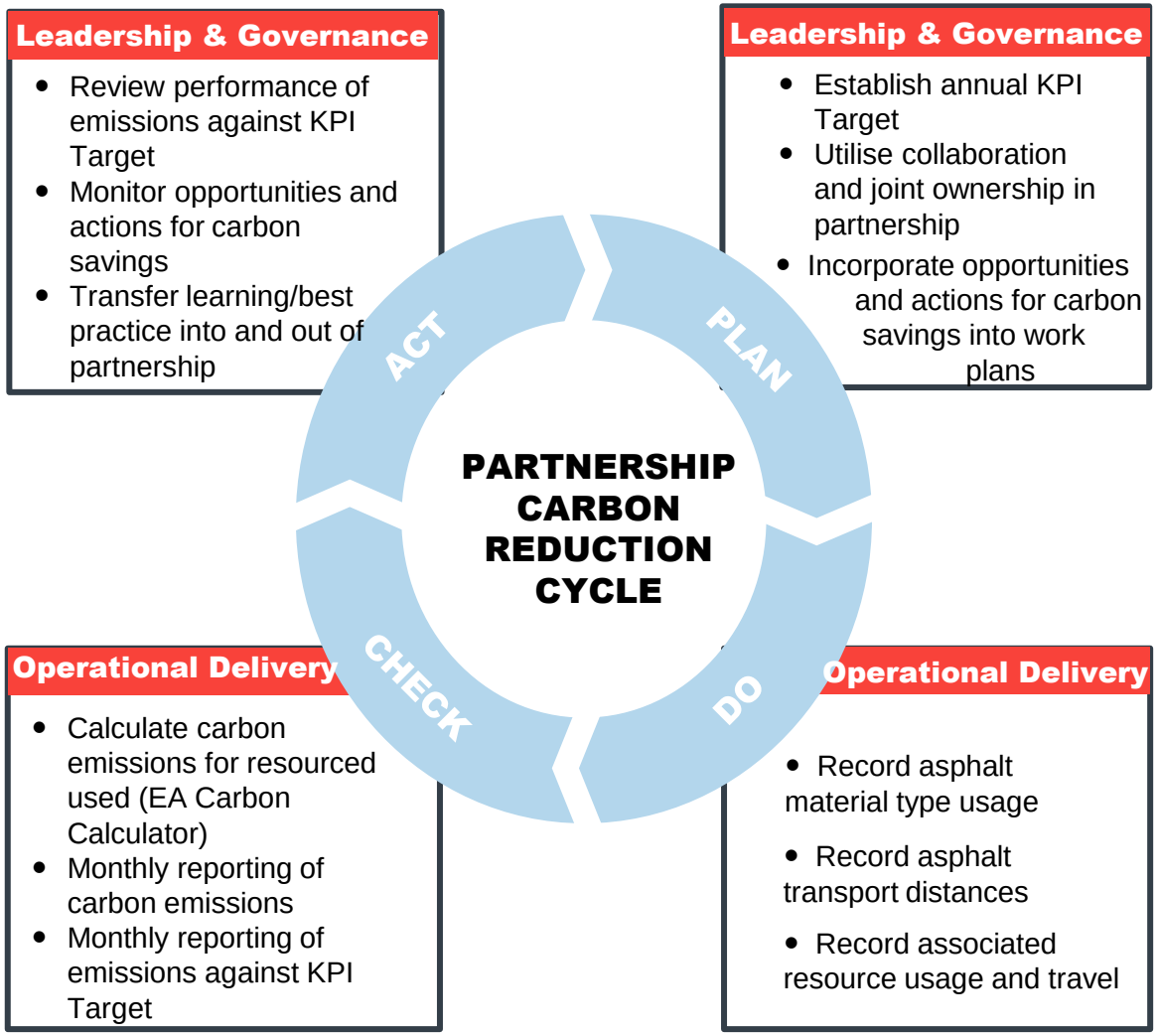


CASE STUDY 4: DORSET HIGHWAYS WORKS TERM SERVICE CONTRACT

Payment Options

Performance Management

- The contract operates under 11 KPIs that were designed by Dorset Council to deliver the desired outcomes for both parties to the contract.
- Alongside ongoing performance management, these are also used as part of the evaluation process when considering service period extensions.
- Two of these KPIs specifically relate to carbon reduction initiatives and have been designed to incentivise behaviours that inform operational activity.
  - KPI 5a: To measure the amount of material that is recycled into the highways network annually
  - KPI 5b: The amount of CO2e that is produced per tonne of material laid on an annual basis.



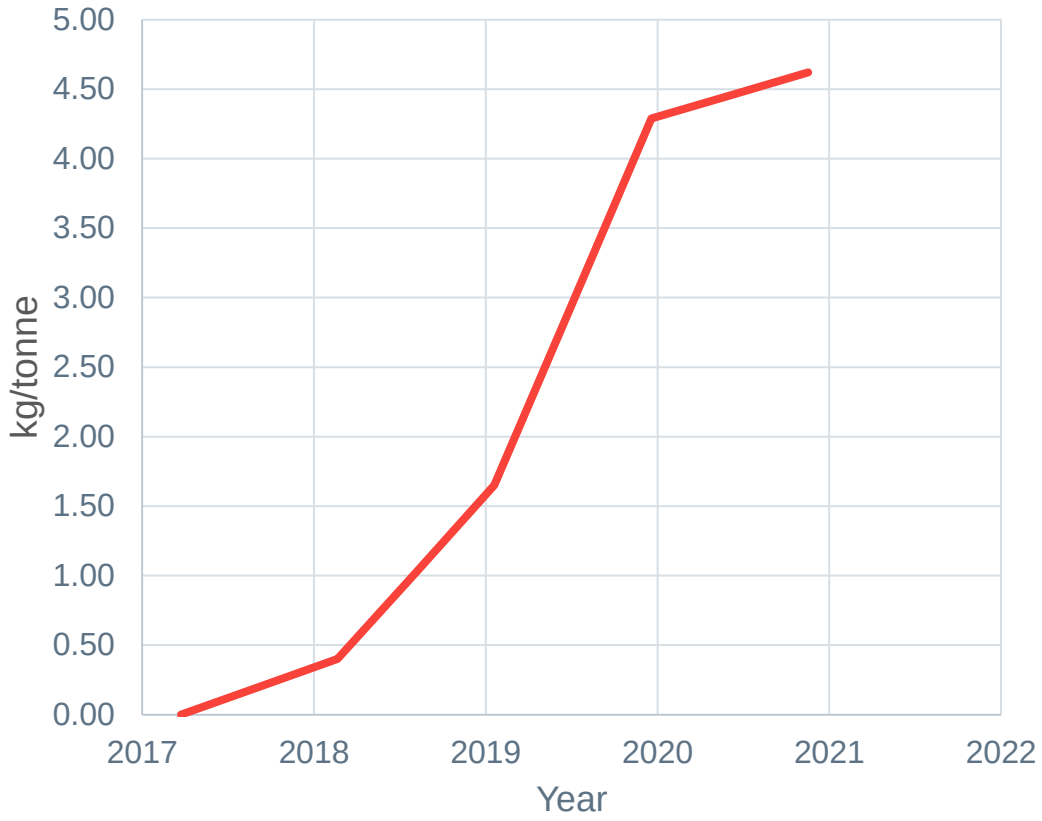
CASE STUDY 4: DORSET HIGHWAYS WORKS TERM SERVICE CONTRACT

Payment Options

Outcomes achieved

- Partnership fund was used to cover the cost of increased testing as part of the introduction of Heidelberg's Energy Reduced Asphalt range. Over an 18 month period its use increased to 53% of all asphalt laid (October 2019)
- Partnership fund was used to trial ERA warm mix asphalt with Shell Bitumen CarbonSink binder (UK first) , which contains biogenic material that absorbs and stores CO2 throughout its lifecycle
- The amount of CO_2e that is produced per tonne of material laid has reduced from 58.40 kg/tonne (2017 baseline) to 51.35 kg/tonne (December 2022)
- The contract typically lays more than 58,000 tonnes of asphalt per year, which at a saving of 4.62 kg/tonne presents a total reduction in carbon of 268 tonnes per year
- 24% of all materials used through the contract are secondary materials (December 2022)

CO_2e saved per tonne of asphalt laid (April 2017 baseline)



Thank you

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Panel Discussion

- **Mike O’Dowd Jones**
- **David Ogden**
- **Kim Yates**
- **David Clegg**

Thank You

To access the full report, please visit:

https://www.ciht.org.uk/carbon&procurement

Or scan the QR code